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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,377	02/18/2004	Randall L. Duncan	IDF 2557 (4000-15600)	2796
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/781,377	Applicant(s) DUNCAN ET AL.	
	Examiner JOHN A. ANDERSON	Art Unit 3696	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In the amendment filed 01/21/2009, the following has occurred: claims 1,7,15 and 19 have been amended. Claim 6 has been canceled. Claims 1-25 are pending and are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman-Amuah M.K. (US Pat No: 6529909) and in view of Daley K (US Pat No: 5650994).
4. As regards claims 1 and 7, Bowman-Amuah M.K. discloses a system for streaming conversion of data from a first system to a second system, comprising:

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- an extractor component that extracts a unit of data from the first system; [column 20, lines 25-34]
- a translator component that converts the unit of data from a first data format compatible with the first system to a second data format compatible with the second system; and [column 44 lines 65 to column 45 lines 1]

Bowman-Amuah M.K. does not disclose a loader component that loads the unit of data converted to the second data format into the second system, and the extractor, the translator, and loader components convert the unit of data during normal operation of the first and second systems, wherein the normal operation comprises operating on data from the first system other than the unit of data from the first system during the conversion of the unit of data from the first system, and wherein the extractor, translator, and loader components extract, convert, and load generally in parallel.

Daley K discloses a loader component that loads the unit of data converted to the second data format into the second system, and the extractor, the translator, and loader components convert the unit of data during normal operation of the first and second systems, wherein the normal operation comprises operating on data from the first system other than the unit of data from the first system during the conversion of the unit of data from the first system, and wherein the extractor,

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translator, and loader components extract, convert, and load generally in parallel.[column 41 lines 40-50]

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to use Daley K in the device of Bowman-Amuah M.K.

The motivation would have been to the PVC controller in turn provides confirmation to the Level 1 Gateway 108. [column 41 lines 40-50]

5. As regards claim 2, Bowman-Amuah discloses, wherein the extractor component reads the unit of data from the first system to extract the data. [Column 25], lines 60 to 62]
6. As regards claim 3, Bowman-Amuah discloses, wherein the unit of data is further defined as an account having a portion of data in a first file and a portion of data in a second file, both the first and second files associated with the first system. [Column 82, lines 34-42]
7. As regards claim 4, Bowman-Amuah discloses, wherein the unit of data is identified in the first system as converted to the second system after the loader component loads the unit of data into the second system .[column 12, lines 19-28]

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8. As regards claim 5, Bowman-Amuah discloses, further comprising a hierarchy component that translates a hierarchy associated with the unit of data from the first data format to the second data format. [Column 112, line 48-54, column 57 lines 23-29]
9. As regards claim 8, Bowman-Amuah discloses, further comprising:
 - extracting a second unit of data from the database associated with the first system. [column 217, lines 31-40]
 - translating the unit of data; and translating the second unit of data from the first format to the second format while loading the unit of data into the database associated with the second system. [column 224 line 66 to column 225 line 9]
10. As regards claim 9, Bowman-Amuah discloses, wherein the first and second systems are defined as billing systems. [column 143, lines 41-42]
11. As regards claim 10, Bowman-Amuah discloses, wherein the first system is further defined as a legacy billing system. [column 143, lines 41-42]
12. As regards claim 11, Bowman-Amuah discloses, further comprising locking the unit of data in the database associated with the first system to restrict access to the unit of data during the extracting, translating, and loading. [column 58 line 50]

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to column 59 line 2]

13. As regards claim 12, Bowman-Amuah discloses, further comprising updating an auditing component regarding a status of conversion of the unit of data. [column 54, lines 23-29]
14. As regards claim 13, Bowman-Amuah discloses, further comprising notifying a data warehouse that the unit of data has been converted to the second system. [column 58, lines 13-17]
15. As regards claim 14, Bowman-Amuah discloses, wherein the first system is further defined as a first billing system, the second system is further defined as a second billing system, and the unit of data is at least a portion of a customer account and wherein the method further comprises:
 - extracting unbilled usage related to the customer account from the first billing system; [column 20, lines 25-34]
 - updating, for other systems, the location of the customer account to the second billing system; [column 64, lines 3-12]
 - posting, by one of the other systems, unbilled usage related to the customer account to the first billing system after updating the location of the customer account to the second billing system; [column 179, lines 12- 24]

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- extracting the subsequently posted unbilled usage from the first billing system; [column 20, lines 25-34]
- comparing the unbilled usage from the second billing system to the unbilled usage extracted from the first billing system to identify new unbilled usage related to the customer account; [column 280, lines 60-64]
- loading the new unbilled usage to the second billing system. [column 193 line 63 to column 194 line 8]

16. As regards claim 15, Bowman-Amuah discloses a system for streaming conversion of data, comprising: a first system having data in a first format; a second system having data in a second format;
- a data warehouse in communication with the first and second systems and that stores portions of data from the first and second systems; [column 23, lines 35-39]
 - an auditing system that monitors changes to data in the first and second systems; [column 18, lines 13-33]
 - an enterprise system maintaining standards related to data in the first and second systems; [column 26 line 66 to column 27 line 3]
 - an extractor component that extracts a unit of data from the first system; [column 20, lines 25-34]

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- a translator component that converts the unit of data from the first format compatible with the first system to the second format compatible with the second system; [column 44 lines 65 to column 45 lines 1]
- a audit component that notifies the audit system regarding the conversion of the unit of data; [column 18, lines 13-33]
- a warehouse component that notifies the data warehouse regarding the conversion of the unit of data to the second system. [Column 23, lines 35- 39]

Bowman-Amuah M.K. does not disclose a loader component that loads the unit of data converted to the second format into the second system, and the extractor, the translator, and the loader components extract, convert, and load the unit of data during normal operation of the first and second systems, wherein the normal operation comprises operating on a second unit of the data from the first system during the conversion of the unit of data from the first system, and wherein the extractor, translator and loader components extract, translate and load generally in parallel;

Daley K discloses a loader component that loads the unit of data converted to the second format into the second system, and the extractor, the translator, and the loader components extract, convert, and load the unit of data during normal operation of the first and second systems, wherein the normal operation comprises operating on a second unit of the data from the first system during the

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conversion of the unit of data from the first system, and wherein the extractor, translator and loader components extract, translate and load generally in parallel; [column 43 lines 54-66]

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to use Daley K in the device of Bowman-Amuah M.K.

The motivation would have been to the PVC controller in turn provides confirmation to the Level 1 Gateway 108. [column 41 lines 40-50]

17. As regards claim 16, Bowman-Amuah discloses, further comprising:
a controller that parallelizes conversion of the unit of data by directing the extractor component, the translator component, and the loader component.
[column 64, lines 29-37, column 199 lines 63-03]
18. As regards claim 17, Bowman-Amuah discloses, wherein the audit component and the warehouse component are operably coupled to the controller. [column 200, lines 3-6]
19. As regards claim 18, Bowman-Amuah discloses, further comprising a hierarchy component in communication with the controller and that translates hierarchy information related to the single customer. [column 20], lines 60-66, column 224 lines 12-26] 21.

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20. As regards claim 19, Bowman-Amuah discloses, wherein the controller promotes locking only a portion of data of the first system related to the unit of data such that the first system operates with the second portion of the data of the first system during the conversion of the unit of data to the second system. [column 64, lines 51 -59, column 59 lines 24-30 and column 311 lines 15 -24] .
21. As regards claim 20, Bowman-Amuah discloses, wherein the second portion of data of the first system is further defined as the data of the first system other than the unit of data. [column 12, lines 19-28] 23.
22. As regards claim 21, Bowman-Amuah discloses, wherein the first and second systems are further defined as billing systems and wherein the unit of data is further defined as account information for a customer. [column 130, lines 18-33] 24.
23. As regards claim 22, Bowman-Amuah discloses, wherein the unit of data is further defined as account information for a single customer. [column 130, lines 18-33]
24. As regards claims 23 and 25, Bowman-Amuah discloses, wherein the unit of data comprises billing history for a single customer. [column 130, lines 18-33]

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25. As regards claim 24, Bowman-Amuah discloses, further comprising:

- a plurality of extractor components wherein each extractor unit of the plurality of extractor components extracts separate units of data from the first system and writes the extracted units of data to a file;[column 20, lines 25-34, column 201 lines 3-9]
- a plurality of translator components, wherein each translator component of the plurality of translator components reads one of the units of data from the file and converts the unit of data from the first format compatible with the first system to the second format compatible with the second system; [column 44 lines 65 to column 45 lines 1, column 281 lines 32 -36]
- a queue used by the plurality of extractors and plurality of translators that coordinates the extraction and translation of the units of data. [column 116, lines 49- 58, column 201 lines 10-17]

Response to Arguments

26. Applicant's arguments with respect to claims 1,7 and 15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN A. ANDERSON whose telephone number is (571)270-3327. The examiner can normally be reached on Monday through Friday 8:00 to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dixon can be reached on 571-272-6803. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John A Anderson/

John A Anderson

Examiner, Art Unit 3696

Examiner

Art Unit 3696

/J. A. A./

Examiner, Art Unit 3696 03/31/2009

/Daniel S Felten/

Primary Examiner, Art Unit 3696